ENTERED

RAW SEQUENCE LISTING   DATE: 05/16/2002
PATENT APPLICATION: US/09/658,835A   TIME: 16:57:01

Input Set : **A:\PTO.VSK.txt**
Output Set: **N:\CRF3\05162002\I658835A.raw**

```
  3 <110> APPLICANT: Duvick, Johnathan P.
  4        Gilliam, Jacob T.
  5        Maddox, Joyce R.
  6        Rao, Aragula Gururaj
  7        Crasta, Oswald R.
  8        Folkerts, Otto
 10 <120> TITLE OF INVENTION: Amino Polyol Aamine Oxidase Polynucleotides and Related
Polypeptides and
 11        Methods of Use
 13 <130> FILE REFERENCE: 1134R
 15 <140> CURRENT APPLICATION NUMBER: US 09/658,835A
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C--> `16 <141> CURRENT FILING DATE: 2002-05-03`
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 18 <150> PRIOR APPLICATION NUMBER: US 60/092,936
 19 <151> PRIOR FILING DATE: 1998-07-25
 21 <150> PRIOR APPLICATION NUMBER: US 60/135,391
 22 <151> PRIOR FILING DATE: 1999-05-21
 24 <150> PRIOR APPLICATION NUMBER: US 09/352,159
 25 <151> PRIOR FILING DATE: 1999-07-12
 27 <150> PRIOR APPLICATION NUMBER: US 09/352,168
 28 <151> PRIOR FILING DATE: 1999-07-12
 30 <160> NUMBER OF SEQ ID NOS: 53
 32 <170> SOFTWARE: PatentIn version 3.1
 34 <210> SEQ ID NO: 1
 35 <211> LENGTH: 372
 36 <212> TYPE: DNA
 37 <213> ORGANISM: Exophiala spinifera
 39 <220> FEATURE:
 40 <221> NAME/KEY: misc_feature
 41 <222> LOCATION: (346)..(346)
 42 <223> OTHER INFORMATION: n = A, T, C, or G
 45 <400> SEQUENCE: 1
 46 gggccccggc gttctcgtag gctgcgcgga gttggtccca gacagacttt tgtcgtacct     60
 48 gcttggactg ttgggaccac ttccgtcccg ggtctccgac catgaaacag gtaatggacc    120
 50 attgtcgatc gacgtcgatg ctggtatctc tggcaaatga gatggggtca cagctcgatt    180
 52 ggaggacgcc cgagaagcct tgttcgcgcc accacggctt gtcccatacg aagactatct    240
 54 tgctatagta gcccaggata gaattttccg ccaatgcttg cttctcggcg ggaagaggtg    300
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W--> `56 gtgaaaatgt caaggtggga tacaaggttg tcggtaacga aaccancacc tttttgcttc    360`
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 58 ggaacacggc gc                                                        372
 61 <210> SEQ ID NO: 2
 62 <211> LENGTH: 182
 63 <212> TYPE: DNA
 64 <213> ORGANISM: Exophiala spinifera
 66 <400> SEQUENCE: 2
 67 gaattttccg ccaatgcttg cttctcggcg ggaagaggtg gtgaaaatgt caaggtggga     60
```

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```
 69 tacaaggttg tcggtaacga aaccaccacc tttttgcttc ggaacacggc gcccgaggcc   120
 71 gatcgtactg tacagccgga tgccgactgc tcaatttcag cgacgggggt gttgaggtgc   180
 73 ac                                                                  182
 76 <210> SEQ ID NO: 3
 77 <211> LENGTH: 29
 78 <212> TYPE: DNA
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C--> 79 **<213> ORGANISM: Artificial**
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 81 <220> FEATURE:
 82 <223> OTHER INFORMATION: Designed oligonucleotide for 3' RACE N21965
 84 <400> SEQUENCE: 3
 85 tggtttcgtt accgacaacc ttgtatccc                                      29
 88 <210> SEQ ID NO: 4
 89 <211> LENGTH: 28
 90 <212> TYPE: DNA
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C--> 91 **<213> ORGANISM: Artificial**
```
 93 <220> FEATURE:
 94 <223> OTHER INFORMATION: Designed oligonucleotide for 5' RACE 21968
 96 <400> SEQUENCE: 4
 97 gagttggtcc cagacagact tttgtcgt                                       28
100 <210> SEQ ID NO: 5
101 <211> LENGTH: 1389
102 <212> TYPE: DNA
103 <213> ORGANISM: Exophiala spinifera
105 <220> FEATURE:
106 <221> NAME/KEY: CDS
107 <222> LOCATION: (1)..(1386)
108 <223> OTHER INFORMATION:
110 <400> SEQUENCE: 5
111 gac aac gtt gcg gac gtg gta gtg gtg ggc gct ggc ttg agc ggt ttg     48
112 Asp Asn Val Ala Asp Val Val Val Val Gly Ala Gly Leu Ser Gly Leu
113 1               5                   10                  15
115 gag acg gca cgc aaa gtc cag gcc gcc ggt ctg tcc tgc ctc gtt ctt     96
116 Glu Thr Ala Arg Lys Val Gln Ala Ala Gly Leu Ser Cys Leu Val Leu
117             20                  25                  30
119 gag gcg atg gat cgt gta ggg gga aag act ctg agc gta caa tcg ggt    144
120 Glu Ala Met Asp Arg Val Gly Gly Lys Thr Leu Ser Val Gln Ser Gly
121         35                  40                  45
123 ccc ggc agg acg act atc aac gac ctc ggc gct gcg tgg atc aat gac    192
124 Pro Gly Arg Thr Thr Ile Asn Asp Leu Gly Ala Ala Trp Ile Asn Asp
125     50                  55                  60
127 agc aac caa agc gaa gta tcc aga ttg ttt gaa aga ttt cat ttg gag    240
128 Ser Asn Gln Ser Glu Val Ser Arg Leu Phe Glu Arg Phe His Leu Glu
129 65                  70                  75                  80
131 ggc gag ctc cag agg acg act gga aat tca atc cat caa gca caa gac    288
132 Gly Glu Leu Gln Arg Thr Thr Gly Asn Ser Ile His Gln Ala Gln Asp
133                 85                  90                  95
135 ggt aca acc act aca gct cct tat ggt gac tcc ttg ctg agc gag gag    336
136 Gly Thr Thr Thr Thr Ala Pro Tyr Gly Asp Ser Leu Leu Ser Glu Glu
137                 100                 105                 110
```

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Input Set : **A:\PTO.VSK.txt**
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```
139 gtt gca agt gca ctt gcg gaa ctc ctc ccc gta tgg tct cag ctg atc        384
140 Val Ala Ser Ala Leu Ala Glu Leu Leu Pro Val Trp Ser Gln Leu Ile
141         115                     120                 125
143 gaa gag cat agc ctt caa gac ctc aag gcg agc cct cag gcg aag cgg        432
144 Glu Glu His Ser Leu Gln Asp Leu Lys Ala Ser Pro Gln Ala Lys Arg
145         130                     135                 140
147 ctc gac agt gtg agc ttc gcg cac tac tgt gag aag gaa cta aac ttg        480
148 Leu Asp Ser Val Ser Phe Ala His Tyr Cys Glu Lys Glu Leu Asn Leu
149 145                     150                     155             160
151 cct gct gtt ctc ggc gta gca aac cag atc aca cgc gct ctg ctc ggt        528
152 Pro Ala Val Leu Gly Val Ala Asn Gln Ile Thr Arg Ala Leu Leu Gly
153                 165                     170                 175
155 gtg gaa gcc cac gag atc agc atg ctt ttt ctc acc gac tac atc aag        576
156 Val Glu Ala His Glu Ile Ser Met Leu Phe Leu Thr Asp Tyr Ile Lys
157         180                     185                 190
159 agt gcc acc ggt ctc agt aat att ttc tcg gac aag aaa gac ggc ggg        624
160 Ser Ala Thr Gly Leu Ser Asn Ile Phe Ser Asp Lys Lys Asp Gly Gly
161         195                     200                 205
163 cag tat atg cga tgc aaa aca ggt atg cag tcg att tgc cat gcc atg        672
164 Gln Tyr Met Arg Cys Lys Thr Gly Met Gln Ser Ile Cys His Ala Met
165         210                     215                 220
167 tca aag gaa ctt gtt cca ggc tca gtg cac ctc aac acc ccc gtc gct        720
168 Ser Lys Glu Leu Val Pro Gly Ser Val His Leu Asn Thr Pro Val Ala
169 225                     230                     235             240
171 gaa att gag cag tcg gca tcc ggc tgt aca gta cga tcg gcc tcg ggc        768
172 Glu Ile Glu Gln Ser Ala Ser Gly Cys Thr Val Arg Ser Ala Ser Gly
173                 245                     250                 255
175 gcc gtg ttc cga agc aaa aag gtg gtg gtt tcg tta ccg aca acc ttg        816
176 Ala Val Phe Arg Ser Lys Lys Val Val Val Ser Leu Pro Thr Thr Leu
177                 260                     265                 270
179 tat ccc acc ttg aca ttt tca cca cct ctt ccc gcc gag aag caa gca        864
180 Tyr Pro Thr Leu Thr Phe Ser Pro Pro Leu Pro Ala Glu Lys Gln Ala
181                 275                     280                 285
183 ttg gcg gaa aat tct atc ctg ggc tac tat agc aag ata gtc ttc gta        912
184 Leu Ala Glu Asn Ser Ile Leu Gly Tyr Tyr Ser Lys Ile Val Phe Val
185         290                     295                 300
187 tgg gac aag ccg tgg tgg cgc gaa caa ggc ttc tcg ggc gtc ctc caa        960
188 Trp Asp Lys Pro Trp Trp Arg Glu Gln Gly Phe Ser Gly Val Leu Gln
189 305                     310                     315             320
191 tcg agc tgt gac ccc atc tca ttt gcc aga gat acc agc atc gac gtc        1008
192 Ser Ser Cys Asp Pro Ile Ser Phe Ala Arg Asp Thr Ser Ile Asp Val
193                 325                     330                 335
195 gat cga caa tgg tcc att acc tgt ttc atg gtc gga gac ccg gga cgg        1056
196 Asp Arg Gln Trp Ser Ile Thr Cys Phe Met Val Gly Asp Pro Gly Arg
197                 340                     345                 350
199 aag tgg tcc caa cag tcc aag cag gta cga caa aag tct gtc tgg gac        1104
200 Lys Trp Ser Gln Gln Ser Lys Gln Val Arg Gln Lys Ser Val Trp Asp
201         355                     360                 365
203 caa ctc cgc gca gcc tac gag aac gcc ggg gcc caa gtc cca gag ccg        1152
```

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Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF3\05162002\I658835A.raw

```
204 Gln Leu Arg Ala Ala Tyr Glu Asn Ala Gly Ala Gln Val Pro Glu Pro
205      370              375              380
207 gcc aac gtg ctc gaa atc gag tgg tcg aag cag cag tat ttc caa gga    1200
208 Ala Asn Val Leu Glu Ile Glu Trp Ser Lys Gln Gln Tyr Phe Gln Gly
209 385              390              395              400
211 gct ccg agc gcc gtc tat ggg ctg aac gat ctc atc aca ctg ggt tcg    1248
212 Ala Pro Ser Ala Val Tyr Gly Leu Asn Asp Leu Ile Thr Leu Gly Ser
213              405              410              415
215 gcg ctc aga acg ccg ttc aag agt gtt cat ttc gtt gga acg gag acg    1296
216 Ala Leu Arg Thr Pro Phe Lys Ser Val His Phe Val Gly Thr Glu Thr
217              420              425              430
219 tct tta gtt tgg aaa ggg tat atg gaa ggg gcc ata cga tcg ggt caa    1344
220 Ser Leu Val Trp Lys Gly Tyr Met Glu Gly Ala Ile Arg Ser Gly Gln
221              435              440              445
223 cga ggt gct gca gaa gtt gtg gct agc ctg gtg cca gca gca tag        1389
224 Arg Gly Ala Ala Glu Val Val Ala Ser Leu Val Pro Ala Ala
225      450              455              460
228 <210> SEQ ID NO: 6
229 <211> LENGTH: 462
230 <212> TYPE: PRT
231 <213> ORGANISM: Exophiala spinifera
233 <400> SEQUENCE: 6
235 Asp Asn Val Ala Asp Val Val Val Val Gly Ala Gly Leu Ser Gly Leu
236 1              5              10              15
239 Glu Thr Ala Arg Lys Val Gln Ala Ala Gly Leu Ser Cys Leu Val Leu
240              20              25              30
243 Glu Ala Met Asp Arg Val Gly Gly Lys Thr Leu Ser Val Gln Ser Gly
244              35              40              45
247 Pro Gly Arg Thr Thr Ile Asn Asp Leu Gly Ala Ala Trp Ile Asn Asp
248      50              55              60
251 Ser Asn Gln Ser Glu Val Ser Arg Leu Phe Glu Arg Phe His Leu Glu
252 65              70              75              80
255 Gly Glu Leu Gln Arg Thr Thr Gly Asn Ser Ile His Gln Ala Gln Asp
256              85              90              95
259 Gly Thr Thr Thr Thr Ala Pro Tyr Gly Asp Ser Leu Leu Ser Glu Glu
260              100              105              110
263 Val Ala Ser Ala Leu Ala Glu Leu Leu Pro Val Trp Ser Gln Leu Ile
264              115              120              125
267 Glu Glu His Ser Leu Gln Asp Leu Lys Ala Ser Pro Gln Ala Lys Arg
268      130              135              140
271 Leu Asp Ser Val Ser Phe Ala His Tyr Cys Glu Lys Glu Leu Asn Leu
272 145              150              155              160
275 Pro Ala Val Leu Gly Val Ala Asn Gln Ile Thr Arg Ala Leu Leu Gly
276              165              170              175
279 Val Glu Ala His Glu Ile Ser Met Leu Phe Leu Thr Asp Tyr Ile Lys
280              180              185              190
283 Ser Ala Thr Gly Leu Ser Asn Ile Phe Ser Asp Lys Lys Asp Gly Gly
284              195              200              205
287 Gln Tyr Met Arg Cys Lys Thr Gly Met Gln Ser Ile Cys His Ala Met
```

```
288     210                    215                   220
291 Ser Lys Glu Leu Val Pro Gly Ser Val His Leu Asn Thr Pro Val Ala
292 225                230                   235                   240
295 Glu Ile Glu Gln Ser Ala Ser Gly Cys Thr Val Arg Ser Ala Ser Gly
296                245                   250                   255
299 Ala Val Phe Arg Ser Lys Lys Val Val Val Ser Leu Pro Thr Thr Leu
300                260                   265                   270
303 Tyr Pro Thr Leu Thr Phe Ser Pro Pro Leu Pro Ala Glu Lys Gln Ala
304           275                   280                   285
307 Leu Ala Glu Asn Ser Ile Leu Gly Tyr Tyr Ser Lys Ile Val Phe Val
308      290                   295                   300
311 Trp Asp Lys Pro Trp Trp Arg Glu Gln Gly Phe Ser Gly Val Leu Gln
312 305                310                   315                   320
315 Ser Ser Cys Asp Pro Ile Ser Phe Ala Arg Asp Thr Ser Ile Asp Val
316                325                   330                   335
319 Asp Arg Gln Trp Ser Ile Thr Cys Phe Met Val Gly Asp Pro Gly Arg
320                340                   345                   350
323 Lys Trp Ser Gln Gln Ser Lys Gln Val Arg Gln Lys Ser Val Trp Asp
324           355                   360                   365
327 Gln Leu Arg Ala Ala Tyr Glu Asn Ala Gly Ala Gln Val Pro Glu Pro
328      370                   375                   380
331 Ala Asn Val Leu Glu Ile Glu Trp Ser Lys Gln Gln Tyr Phe Gln Gly
332 385                390                   395                   400
335 Ala Pro Ser Ala Val Tyr Gly Leu Asn Asp Leu Ile Thr Leu Gly Ser
336                405                   410                   415
339 Ala Leu Arg Thr Pro Phe Lys Ser Val His Phe Val Gly Thr Glu Thr
340           420                   425                   430
343 Ser Leu Val Trp Lys Gly Tyr Met Glu Gly Ala Ile Arg Ser Gly Gln
344           435                   440                   445
347 Arg Gly Ala Ala Glu Val Val Ala Ser Leu Val Pro Ala Ala
348      450                   455                   460
351 <210> SEQ ID NO: 7
352 <211> LENGTH: 1442
353 <212> TYPE: DNA
354 <213> ORGANISM: Exophiala spinifera
356 <220> FEATURE:
357 <221> NAME/KEY: CDS
358 <222> LOCATION: (1)..(645)
359 <223> OTHER INFORMATION:
361 <220> FEATURE:
362 <221> NAME/KEY: Intron
363 <222> LOCATION: (646)..(698)
364 <223> OTHER INFORMATION:
366 <220> FEATURE:
367 <221> NAME/KEY: CDS
368 <222> LOCATION: (699)..(1439)
369 <223> OTHER INFORMATION:
371 <400> SEQUENCE: 7
372 gac aac gtt gcg gac gtg gta gtg gtg ggc gct ggc ttg agc ggt ttg     48
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/16/2002
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 346
Seq#:39; N Pos. 649
Seq#:40; Xaa Pos. 216

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 10

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,12,13,14,15,34

VERIFICATION SUMMARY   DATE: 05/16/2002
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```
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300
L:79 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3
L:91 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:1004 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12
L:1017 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:1030 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:1042 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:5233 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:34
L:5768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:600
L:5880 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:208
```